

**Remarks/Arguments:**

Claims 1 and 4-24 are currently pending in this application. Claims 1 and 14 have been amended. Claims 4-6 and 15-17 have been cancelled. Support for the amendments can be found in the specification, specifically paragraphs [0085] to [0094] of the publication, and claims as originally filed. Applicants respectfully request reconsideration of the application based on the following remarks.

**Applicant's Response to 35 U.S.C. §103 (a) Rejection over Kanna**

Claims 1-2, 4-12 and 15-23 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2004/0009430 to Kanna et al. (hereinafter "Kanna"). Applicants respectfully traverse this rejection and request reconsideration on the basis that Kanna fails to render the claims obvious.

The Examiner acknowledges that Kanna does not teach the combination of recurring units (a1), (a2) and (a3), but alleges that:

...it would have been obvious to one of ordinary skill in the art to combine the recurring units because Kanna teaches recurring units combined in any combination as shown increases solubility of the resin in an alkali developer, has less line edge roughness and less development time.

(Office Action, at pages 3-4) (citations omitted).

Furthermore, in response to the previous amendments, the Examiner referred Applicants to MPEP 2106 and stated that:

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

(Office Action, at page 5).

Applicants respectfully submit that pending claims 18-23 depend upon claim 14 and thus require all the limitations of claim 14. As the Examiner did not include claim 14 in this rejection, Applicants respectfully submit that the rejection of claims 18-23 over Kanna is improper. However, in the interest of expediting prosecution, Applicants have amended claim 14 and will address the rejection of claims 18-23 accordingly.

Claim 1 has been amended. In particular, the subject matter from claims 4 and 6 has been incorporated into claim 1. Similarly, the subject matter of claims 15 and 17 was added to claim 14. Nowhere in Kanna is such a positive-type resist composition for liquid immersion lithography having the structures of amended claims 1 and 14 disclosed or suggested.

As previously argued in regards to Kanna, Kanna discloses a resin, which corresponds to a resin component (A) of the present invention whose solubility in an alkali developing solution increases by the action of the acid. The resin of Kanna includes repeating units having groups represented by general formula (Z), and repeating units whose solubility in the alkali developing solution increases as a result of decomposition by the action of an acid.

Kanna discloses use of a resin having the repeating units shown by general formula (Z) as an essential component, and further, disclose a very broad range of the combination of repeating units that enables the co-use of the repeating units having the groups shown by general formula (Z). Co-use of repeating units of methacrylic ester and acrylic ester of the present invention in a specified ratio by selecting from among the broad range of combination of repeating units of Kanna or the effects thereof as a result of using such resin in a resist composition for immersion lithography is not obvious or easily anticipated by one of skill in the art.

Nowhere in Kanna is the constitutional unit (a3) as represented by Formula 3 in claims

1 and 14, disclosed, taught or suggested. Furthermore, it would not be obvious for one of skill in the art to incorporate the constitutional unit (a3) with the teachings of Kanna.

In the positive-type resist composition according to the present invention, a resin component (A), whose solubility in an alkali developing solution increases by the action of an acid, contains specified constitutional units of acrylic ester (a1) and methacrylic ester (a2), thus, use of an exposure method such as liquid immersion lithography, obtains a resist composition having a high contact angle with respect to the immersion liquid, a higher dissolution resistance, and in particular, a high barrier property with respect to water. When the present invention employs water as the immersion liquid, a resist pattern having superior resolving ability is achieved.

Accordingly, Kanna does not teach or suggest each and every element of the amended claims 1 and 14. Moreover, Kanna does not render claims 1 and 14 obvious. In view thereof, claims 1 and 14 and all that depend therefrom are not obvious in view of the teachings of Kanna. Applicants respectfully request reconsideration of the Section 103 rejection over claims 1-2, 4-12 and 15-23 based on this combination.

**Applicant's Response to 35 U.S.C. §103 (a) Rejection over Kanna in view of Endo**

Claims 13, 14 and 24 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kanna in view of U.S. Patent Publication No. 2004/0259040 to Endo et al. (hereinafter "Endo"). Applicants respectfully traverse this rejection and request reconsideration on the basis that the combination of references fails to render the claims obvious, as amended herein.

The Examiner acknowledges that Kanna does not disclose a resist composition that may be formed by immersion exposure, but alleges that:

Endo teaches an immersion exposure method comprising

supplying water as the immersion liquid onto a resist film, exposing through the immersion liquid, baking and developing the resist film. It would have been obvious to one of ordinary skill in the art to use immersion exposure in the composition of Kanna because immersion exposure is well known to improve resolution and refine patterns at conventional exposure wavelengths.

(Office Action, at page 5) (citations omitted).

As stated in detail above, claims 1 and 14 have been amended. Claim 13 depends upon claim 1 and claim 24 depends upon claim 14. Nowhere in the combination of references is the subject matter of claims 1 or 14 disclosed or suggested.

Kanna fails to disclose constitutional unit (a3) as represented by Formula 3. Endo was merely cited for its disclosure of an immersion exposure method and fails to cure the deficiencies of Kanna in this regard. Accordingly, Applicants respectfully submit that claims 13, 14 and 24, as amended herein, are not obvious in view of the teachings of Kanna, alone or in combination with Endo. Applicants respectfully request reconsideration and withdrawal of the Section 103 rejection based on this combination.

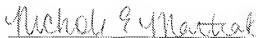
Should the Examiner have any questions or comments concerning the above, the Examiner is respectfully invited to contact the undersigned attorney at the telephone number given below.

The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication, or credit any overpayment, to Deposit Account No. 08-2461. Such authorization includes authorization to charge fees for extensions of time.

Applicant: Ishiduka et al.  
Amendment and Response of April 1, 2010  
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if any, under 37 C.F.R. § 1.17 and also should be treated as a constructive petition for an extension of time in this reply or any future reply pursuant to 37 C.F.R. § 1.136.

Respectfully submitted,



Nichole E. Martiak  
Registration No.: 55,832  
Attorney for Applicants

HOFFMANN & BARON, LLP  
6900 Jericho Turnpike  
Syosset, New York 11791  
(973) 331-1700